

Release notes for ENDF/B Development n-052_Te_128
evaluation

ENDF
B-VII.dev

April 26, 2017

- checkr Warnings:

1. A previous error halted parsing of the current section
MAT=5249, MF= 1, MT=451 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=5249, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      237 TO      281
```

- checkr Errors:

1. A variable is outside the allowed ENDF range
MAT=5249, MF= 1, MT=451 (0): Variable range

```
ERROR(S) FOUND IN MAT=5249, MF= 1, MT=451
MOD =      1 OUT OF RANGE      0 -      0      RECORD NUMBER      237
```

2. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 2, MT=151 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5249, MF= 2, MT=151
SECTION 2/151 NOT IN DIRECTORY      RECORD NUMBER      283
```

3. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 1 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 1
SECTION 3/ 1 NOT IN DIRECTORY      RECORD NUMBER      390
```

4. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 2 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 2
SECTION 3/ 2 NOT IN DIRECTORY      RECORD NUMBER      416
```

5. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 4 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY      RECORD NUMBER      442
```

6. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 16
SECTION 3/ 16 NOT IN DIRECTORY      RECORD NUMBER      457
```

7. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 17
SECTION 3/ 17 NOT IN DIRECTORY RECORD NUMBER 468

8. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 22
SECTION 3/ 22 NOT IN DIRECTORY RECORD NUMBER 475

9. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 28
SECTION 3/ 28 NOT IN DIRECTORY RECORD NUMBER 489

10. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 51 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 51
SECTION 3/ 51 NOT IN DIRECTORY RECORD NUMBER 499

11. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 52 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 52
SECTION 3/ 52 NOT IN DIRECTORY RECORD NUMBER 514

12. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 53 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 53
SECTION 3/ 53 NOT IN DIRECTORY RECORD NUMBER 527

13. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 54 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 54
SECTION 3/ 54 NOT IN DIRECTORY RECORD NUMBER 539

14. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 55
SECTION 3/ 55 NOT IN DIRECTORY RECORD NUMBER 551

15. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 56 (0): Directory (b)

- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 56 | RECORD NUMBER | 562 |
| SECTION 3/ 56 NOT IN DIRECTORY | | |
16. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 57 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 57 | RECORD NUMBER | 573 |
| SECTION 3/ 57 NOT IN DIRECTORY | | |
17. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 58 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 58 | RECORD NUMBER | 583 |
| SECTION 3/ 58 NOT IN DIRECTORY | | |
18. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 59 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 59 | RECORD NUMBER | 593 |
| SECTION 3/ 59 NOT IN DIRECTORY | | |
19. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT= 91 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5249, MF= 3, MT= 91 | RECORD NUMBER | 603 |
| SECTION 3/ 91 NOT IN DIRECTORY | | |
20. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT=102 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5249, MF= 3, MT=102 | RECORD NUMBER | 612 |
| SECTION 3/102 NOT IN DIRECTORY | | |
21. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT=103 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5249, MF= 3, MT=103 | RECORD NUMBER | 633 |
| SECTION 3/103 NOT IN DIRECTORY | | |
22. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT=104 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5249, MF= 3, MT=104 | RECORD NUMBER | 647 |
| SECTION 3/104 NOT IN DIRECTORY | | |
23. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT=105 (0): Directory (b)

- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5249, MF= 3, MT=105 | | |
| | SECTION 3/105 NOT IN DIRECTORY | RECORD NUMBER | 659 |
24. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 3, MT=107 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5249, MF= 3, MT=107 | | |
| | SECTION 3/107 NOT IN DIRECTORY | RECORD NUMBER | 670 |
25. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 2 (0): Directory (b)
- | | | | |
|--|--|---------------|-----|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 2 | | |
| | SECTION 4/ 2 NOT IN DIRECTORY | RECORD NUMBER | 687 |
26. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 16 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 16 | | |
| | SECTION 4/ 16 NOT IN DIRECTORY | RECORD NUMBER | 859 |
27. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 17 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 17 | | |
| | SECTION 4/ 17 NOT IN DIRECTORY | RECORD NUMBER | 870 |
28. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 22 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 22 | | |
| | SECTION 4/ 22 NOT IN DIRECTORY | RECORD NUMBER | 881 |
29. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 28 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 28 | | |
| | SECTION 4/ 28 NOT IN DIRECTORY | RECORD NUMBER | 892 |
30. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 51 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 51 | | |
| | SECTION 4/ 51 NOT IN DIRECTORY | RECORD NUMBER | 903 |
31. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 52 (0): Directory (b)

- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 52 | |
| | SECTION 4/ 52 NOT IN DIRECTORY | RECORD NUMBER 930 |
32. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 53 (0): Directory (b)
- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 53 | |
| | SECTION 4/ 53 NOT IN DIRECTORY | RECORD NUMBER 954 |
33. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 54 (0): Directory (b)
- | | | |
|--|---|-------------------|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 54 | |
| | SECTION 4/ 54 NOT IN DIRECTORY | RECORD NUMBER 978 |
34. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 55 (0): Directory (b)
- | | | |
|--|---|--------------------|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 55 | |
| | SECTION 4/ 55 NOT IN DIRECTORY | RECORD NUMBER 1002 |
35. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 56 (0): Directory (b)
- | | | |
|--|---|--------------------|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 56 | |
| | SECTION 4/ 56 NOT IN DIRECTORY | RECORD NUMBER 1026 |
36. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 57 (0): Directory (b)
- | | | |
|--|---|--------------------|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 57 | |
| | SECTION 4/ 57 NOT IN DIRECTORY | RECORD NUMBER 1050 |
37. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 58 (0): Directory (b)
- | | | |
|--|---|--------------------|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 58 | |
| | SECTION 4/ 58 NOT IN DIRECTORY | RECORD NUMBER 1074 |
38. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 59 (0): Directory (b)
- | | | |
|--|---|--------------------|
| | ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 59 | |
| | SECTION 4/ 59 NOT IN DIRECTORY | RECORD NUMBER 1098 |
39. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 4, MT= 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 4, MT= 91
SECTION 4/ 91 NOT IN DIRECTORY RECORD NUMBER 1121

40. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 5, MT= 16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 5, MT= 16
SECTION 5/ 16 NOT IN DIRECTORY RECORD NUMBER 1146

41. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 5, MT= 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 5, MT= 17
SECTION 5/ 17 NOT IN DIRECTORY RECORD NUMBER 1209

42. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 5, MT= 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 5, MT= 22
SECTION 5/ 22 NOT IN DIRECTORY RECORD NUMBER 1242

43. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 5, MT= 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 5, MT= 28
SECTION 5/ 28 NOT IN DIRECTORY RECORD NUMBER 1440

44. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5249, MF= 5, MT= 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5249, MF= 5, MT= 91
SECTION 5/ 91 NOT IN DIRECTORY RECORD NUMBER 1529

• **psyche** Warnings:

1. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 128. L = 0 / STRENGTH FUNCTION IS 1.72821E-05 / AVERAGE GAMMA WIDTH 3.49375E-02 / LIES OUTSIDE LIMITS 4.00000E-02 TO 9.00000E+00 EV. (0): URR str. ftn.

```
FILE 2
SECTION 151
ISOTOPE MASS = 128. L = 0
STRENGTH FUNCTION IS 1.72821E-05
AVERAGE GAMMA WIDTH 3.49375E-02
... [1 more lines]
```

• **groupie** Errors:

1. Very small elastic cross section found
0: Small elastic

 ENDF/B Input and Output Data Filenames
 ENDFB.IN
 ENDFB.OUT
 ... [97 more lines]

• fudge-4.0 Warnings:

1. Missing a channel with a particular angular momenta combination
resonances / resolved / MultiLevel BreitWigner (Error # 0): missingResonanceChannel

WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"
 WARNING: Missing a channel with angular momenta combination L = 1, J = 0.5 and S = 1.5 for "capture"
 WARNING: Missing a channel with angular momenta combination L = 1, J = 1.5 and S = 1.5 for "capture"
 WARNING: Missing a channel with angular momenta combination L = 1, J = 2.5 and S = 1.5 for "capture"

2. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 0: total (Error # 0): CS Sum.

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.58%

3. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 1: (z,n) (Error # 0): CS Sum.

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.15%

• fudge-4.0 Errors:

1. Calculated and tabulated Q values disagree.
reaction label 11: n[multiplicity:'2'] + Te127 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -9442193.109863281 eV vs -8783390. eV!

2. Calculated and tabulated Q values disagree.
reaction label 12: n[multiplicity:'3'] + Te126 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -15730034.77720642 eV vs -1.50785e7 eV!

3. Calculated and tabulated Q values disagree.
reaction label 13: n + H1 + Sb127 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -10240846.16670227 eV vs -9581930. eV!

4. Calculated and tabulated Q values disagree.
reaction label 14: Te129 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 5422523.203018188 eV vs 6086090. eV!

5. Calculated and tabulated Q values disagree.
reaction label 15: n + He4 + Sn124 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -3840139.855499268 eV vs -3.1742e6 eV!

6. Calculated and tabulated Q values disagree.
reaction label 16: H1 + Sb128_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -4261098.0184021 eV vs -3479820. eV!

7. Calculated and tabulated Q values disagree.
reaction label 17: H2 + Sb127_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -8016280.065765381 eV vs -7271810. eV!

8. Calculated and tabulated Q values disagree.
reaction label 18: H3 + Sb126_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -10132048.46310425 eV vs -9464760. eV!

9. Calculated and tabulated Q values disagree.
reaction label 19: He4 + Sn125_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 1892960.778579712 eV vs 2563910. eV!

- njoy2012 Warnings:

1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
group...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 16
only mf4/mf5 provided

2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
group...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 17
only mf4/mf5 provided

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
group...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 22
only mf4/mf5 provided

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
group...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 28
only mf4/mf5 provided

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
grouppr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 91
                           only mf4/mf5 provided
```